



**College of Engineering and Computer Science
Academic Learning Compacts**

Mechanical Engineering - B.S.M.E.

Discipline Specific Knowledge, Skills, Behavior and Values

- 1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics**
- 2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors**
- 3. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts**
- 4. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions**
- 5. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies**

Critical Thinking

- 1. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors**
- 2. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts**
- 3. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions**

Communication

- 1. An ability to communicate effectively with a range of audiences**
- 2. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts**

- 3. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives**
- 4. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies**

Assessment of Mechanical Engineering - B.S.M.E. Outcomes

These outcomes will be assessed using a variety of assessment methods, including:

- Data for the assessment is collected from surveys (graduating students, alumni, industry), capstone (senior design) projects, embedded concept test questions, MMAE Undergraduate committee, curriculum/course improvement reviews, and peer and project mentor reviews.**